

# **F.A.Q.**

## **Frequently Asked Questions about the DIRECT PRO 24/96**

### **What is the DIRECT PRO 24/96?**

We like to think of the new DIRECT PRO 24/96 as a hard disk recording revolution. No longer is there a costly external mixing console. No need for extra microphone pre-amps. No need for outboard effects gear. Just plug in any microphone or audio signal and you're recording multi-channel 24 bit audio right to your hard drive.

The DIRECT PRO 24/96 is not just a sound card by any means. In fact, you'll notice there's quite a bit different about the DIRECT PRO 24/96. From Aardvark's superior clock technology that ensures maximum 24 bit resolution, to the extra shielding on our PCI card to keep the computer noise out of your audio. We even went the extra mile and put 4 universal inputs on the front so you can connect any microphone or audio signal directly into your PC without the hassles of mixers or extra adapters.

Everything we did when designing the new DIRECT PRO 24/96 is about getting *you* an easy to use hard disk recording system. It has all the quality and features of a professional workstation, without the complicated manual and the hefty price tag...

### **Do I need a mixer to use the DIRECT PRO 24/96?**

Not at all. That's exactly why you'll find mic preamps, a headphone output, level adjustment, DSP effects and 10 channel mixer software included with the DIRECT PRO 24/96. Now a musician no longer needs to buy costly external mic pre-amps and mixers, outboard effects, or MIDI gear in order to make great sounding recordings on their PC. We've included all of these features and cleverly integrated them with our unique combination of hardware and software.

The DIRECT PRO 24/96 break-out box has all the I/O of a compact mixer: four microphone or line inputs, phantom power, 4 Main outputs, an independent AUX bus plus MIDI and digital I/O. However, the real cleverness comes from DIRECT PRO 24/96 software. We've completely duplicated a 10 channel mixer, complete with input level trim and sliders, so you don't have to go out and buy a separate mixer just to mix on your PC.

### **Those 4 input jacks on the front look different. What are they?**

So you noticed our unique connectors, eh? These are the new 'combo' connectors from Neutrik that allow you to plug in any 1/4" line level signal or any XLR (3-prong) microphone, both into the same clever connector. This means you can plug in any

balanced or unbalanced audio signal without getting messy adapters or without changing a professional signal to unbalanced just to interface with your PC. This allows you to go directly into your PC from any source so you don't need a mixer just to get audio into the PC. You won't find this on any plain old audio card.

### **Do I need outboard effects gear?**

The DIRECT PRO 24/96 also comes with a fully integrated set of DSP effects just so you don't need to buy extra effects to get great sounding recordings. There's a *3-Band EQ* complete with a sweepable midrange, and a professional *Compressor* with 4 variable controls so you know what you record to the hard drive is absolutely perfect.

You'll also notice the DIRECT PRO 24/96 has an outboard *Reverb Rack* that comes complete with rack handles, except this one is done completely in software. There's even extra RAM on the PCI card to guarantee you're getting a super-smooth reverb that's almost essential when doing professional recordings. All these great effects are included for free and easily accessed from the DIRECT PRO 24/96 software control panel.

### **How can I take advantage of these cool DSP effects?**

Our DSP effects were architecturally designed to give you real-time performance when you need it most: while you're recording to the PC. If you just have a regular sound card and application, it's impossible to do overdubs or monitor an audio effect from the application in your headphones because you can get some serious delays (up to a 1/2a second!). These delays (called 'latency') really get in the way of the creative recording process because everything is out of tempo and slightly out of sync.

With the DIRECT PRO 24/96, all the effects use its powerful DSP engine on the PCI card in the computer, which means the effects are in real-time (zero latency) -- making overdubs and laying down tracks a breeze. You get an amazingly transparent multi-band EQ, an ultra-accurate digital compressor and a sweet sounding reverb. These DSP effects give you the processing power of a rack of expensive outboard gear right inside your PC. It's all included and it's all in real-time!

### **Is the Direct Pro 24/96 better than buying a mixer, effects boxes and a sound card?**

Definitely. Just getting the DIRECT PRO 24/96 is much better than strictly using outboard gear because it's much easier to use and it even makes your audio quality much better. If you get an outboard mixer and effects boxes, not only is it more expensive, but you're also adding a small amount of noise when you try to go from your microphone, into the mixer, out of the mixer into the processors, out of the processors into your sound card. All that extra cabling means more noise is added to your music which really takes away from the punch and dynamics of the final piece.

The DIRECT PRO 24/96 lets you get a super high quality recording because you can go directly from your microphone, right to your hard disk and the signal is shielded the entire way. The result is a much better, cleaner sound to capture the audio just like it sounds the first time you play it. Perfectly clean and natural.

### **How does the Direct Pro 24/96 sound?**

Aardvark has an entire line of products that professionals buy to make their high-end digital audio workstations sound better (check out our expensive, low-jitter clocks!). We've used a lot of that technology and combined it with four sets of excellent A/D and D/A converters and premium microphone pre-amps. The DIRECT PRO 24/96 only uses top of the line, high resolution codecs to make sure you're getting the most out of your music. These full 24-bit codecs (not just 20 bit!) guarantee you 24 bits of audio resolution so it preserves even the smallest detail. You'll be amazed the next time you hear your vocals or playback acoustic and electric guitar. Those extra bits really make a difference.

We've also carefully laid out all the circuits several times to see which layout is the quietest and even tested different components to see which combination produces the best results. Add on top of that the fact that all of our connectors accept professional balanced signals and give you the flexibility to maximize your levels, and you'll figure out why the DIRECT PRO 24/96 sounds just like workstations that cost 10 times more!

### **Where's the noisy 120VAC power input?**

So you noticed that there's no AC power input into the DIRECT PRO 24/96 breakout box? We've designed special circuits to avoid having to connect that noisy AC power right into our breakout box. We've cleverly used that filtered power from the PC and have even added a double-stage power filter inside our breakout box to guarantee the critical A/D and D/A converter chips are getting perfectly stable and reliable power.

We've even added a third-stage power filter (and some special shielding) to the circuits for our Phantom Power supply which powers up your critical microphones. Having amazing audio starts with a stable and quiet power supply. Believe me, you'll hear the difference!

### **Is the noise from my computer getting into my audio?**

This is an excellent question that no one takes more seriously than Aardvark when it comes to computer digital audio. With the DIRECT PRO 24/96, you'll notice that we protect the audio signal starting from the balanced inputs all the way to your hard drive.

It starts with a rugged, yet beautifully shielded break-out box that keeps any noise or other interference far away from the custom microphone pre-amp circuitry. This guarantees noise-free audio at the most critical point of any audio recording, and is another reason why our microphone inputs sound so phenomenal.

Also, if you look closely you'll notice that our PCI card looks different than any other

sound card on the market. Why? Well, once again we went the extra mile and carefully shielded all the critical components *INSIDE* the computer so your audio is completely protected from any PC noise that often ruins PC audio recordings.

Why let a little thing like noise get into your audio? Well, you don't have to worry about it with the professionally shielded DIRECT PRO 24/96!

### **How do the MIC inputs sound?**

We've gone to great lengths to make sure our custom microphone pre-amps sound as amazing as possible. We've extensively tested many different microphone circuits and even added a few tricks to guarantee outstanding fidelity: 3 Discreet Gain Settings, Extra Shielding and an Invariable 48 V Phantom Power Supply.

#### ***3 Discreet Gain Settings***

One of the most important things in designing a microphone pre-amp is allowing for a tremendous amount of gain flexibility without adding noise at the different gain levels. We've carefully optimized in 3 discreet sub-bands to get the best TDH and noise performance at each critical gain range. This is unlike any outboard mixer that only has *one* knob and *one* circuit to cover the entire gain range of all your different uses. You'll find these 2 knobs in the software control panel for the 3 completely independent gain settings. Each custom circuit cover:

- (1) Low-Level for Room & Ambiance
- (2) Normal Level for Vocal & Guitars
- (3) High Level for Drums or Audio Line Inputs

These specific circuits are completely optimized for each gain setting to give you the best audio quality possible for your individual needs. Not even outboard mixers do that!

#### ***Extra Shielding***

You'll also notice that our precious microphones pre-amps are NOT inside the computer. This means computer noise is completely out of the picture. All 4 of our premium microphone pre-amp's are specially shielded in the rugged metal break-out box to keep computer noise and any other RF interference away from your audio. And as if that weren't enough, we've added another shielding module *INSIDE* the breakout box to completely cover all the microphone input circuitry which absolutely guarantees your audio is super-clean and completely noise free.

#### ***Invariable 48 V Phantom Power Supply***

If you're a real professional, or you just want the best microphones for your acoustic guitar, then you'll need to use 'Condenser' type microphones. All condenser microphones were specifically designed to exactly 48.0 volts of DC

power to make the microphone perfectly matched and operating properly. Some microphone pre-amp's have a *variable* power supply which means it doesn't always give exactly 48 volts to the microphone, with as much variation as 20%! This means you're paying more money for a top of the line microphone and then not optimizing it because of the poor Phantom power supply.

The DIRECT PRO 24/96's Phantom power supply uses 2 stage voltage regulator which dramatically reduces phantom noise and provides tight voltage regulation. This guarantees you absolutely perfect power matching and ensures consistent performance from the world's top microphones!

### **Who uses Phantom Power for their microphones?**

The Phantom Power switch on the front of the DIRECT PRO 24/96 lets you use 'condenser' type microphones which are the best of the best when it comes to microphones, usually used for critical vocals or acoustical instruments. These 'condenser' microphones cost a little more and need a special pre-amp with a perfectly matched 48 V Phantom Power supply to keep them working properly. You can use up to four condenser microphones with your DIRECT PRO 24/96 and all four are guaranteed to sound equally amazing. Just hit the button on the front and you've got a truly professional audio interface for any top microphone.

### **Does the DIRECT PRO 24/96 come with recording software?**

The DIRECT PRO 24/96 comes with a full version of Cakewalk Pro Audio 9.0 from Cakewalk and is some really cool multi-channel editing software and has a lot of effects perfect for mixing your final masterpiece. And best of all, it's included FREE when you buy the DIRECT PRO 24/96. It comes on a separate CD included in the DIRECT PRO 24/96 package and has to be installed separately by putting in the number on the CD and matching it with a unique number on the included registration card. That means the DIRECT PRO 24/96 is a full project recording package right out of the box!

### **Does the DIRECT PRO 24/96 actually record audio to my PC?**

The DIRECT PRO 24/96 consists of hardware and software that acts just like an outboard mixer, effects and a professional audio card and sounds like no other. You still need an audio recording application to do all the editing and add even more effects and especially for the mixdown where you really make your mix perfect. Of course the DIRECT PRO 24/96 comes with a powerful multitrack recording software so it's perfectly usable right out of the box, but it's also been extensively tested with almost any audio recording software you choose to work with.

There's lots of companies that do this type of recording software, and almost all of them are a perfect compliment to the DIRECT PRO 24/96's power and flexibility. Some of the industry best are: Steinberg Cubase VST/24, Cakewalk, Cool Edit Pro, Canam Computers, Emagic and Sonic Foundry. The Direct Pro 24/96 will work with any

recording software, and even has special ASIO drivers (included for free!) to give you perfectly seamless integration with the popular Steinberg Cubase VST/24!

### **Will the DIRECT PRO 24/96 slow down my computer?**

That's the best part about the DIRECT PRO 24/96. Not only are the effects and the mixer in real-time, but because all the extra processing is done with its own powerful DSP Engine, that means your computer won't be slowed down at all.

It also means that you don't need a monster of a computer to do professional hard disk recordings. Almost any PC can use the DIRECT PRO 24/96 and its powerful DSP effects. Just plug it in and you're recording multi-channel audio with tons of cool, real-time DSP effects. All without slowing down your computer!

The DIRECT PRO 24/96 will work with almost any PC with at least a 166 MHz processor and at least 32 MB RAM or higher. The PCI host card is true Plug N' Play to get you up and running amazingly fast. Just put the card in the PCI slot, connect the shielded breakout box and install the software and you're ready to start. All that's left is plugging in a microphone you've got your own project recording studio!

### **Can I save any of the settings?**

This is another benefit of having the mixer and effects perfectly and digitally integrated within the DIRECT PRO 24/96 software. Once you've finished your session, just open the *PRESETS* box and save it with any name you want. So on your next session, you can get back to where you started in a matter of seconds, not hours.

In fact, the entire DIRECT PRO 24/96 control panel can be saved as a whole from session to session, or individually isolating and saving each effect as you find the right match for each track. This lets you quickly try different effects and see which sounds better, without losing any of your favorites. Try doing that with an outboard compact mixer and analog effects units.

### **How many channels can I record at the same time?**

You can record up to four separate tracks at the same time -- just enough for a few musicians doing real-time recording around a PC at home or in your recording studio. These four universal inputs are flexible enough for you to record directly from any microphone, and professional enough to take a balanced line level input from a cassette deck, CD Player, mixer or effects boxes. And the S/PDIF I/O even allows you to fly in audio digitally from a CD player or DAT machine!

You'll find the DIRECT PRO 24/96 can handle almost anything you want to throw at it, and you're guaranteed to get some of the best multi-channel recordings around. Just plug it in and go!

### **How many outputs does the DIRECT PRO 24/96 have?**

There are four balanced ¼" TRS line level outputs and a stereo AUX bus on an RCA connectors found on the back of the DIRECT PRO 24/96. This makes it the perfect compliment even for those who already have a mixer or a favorite outboard effects processor. These outputs give incredible routing flexibility when you use our drag-and-drop digital patchbay. You can route any of the tracks to external effects processors by using the outputs as an auxiliary send (for effects loops) while also simultaneously using the main outs for mastering externally.

Don't forget you always have an independent stereo headphone output on the front so no matter what you're doing, you can always carefully monitor your mix!

### **Can I connect the DIRECT PRO 24/96 to MIDI gear or DATs?**

The MIDI I/O on the back of the DIRECT PRO 24/96's sturdy breakout box enclosure allows you to use any software sequencer to slave your synthesizers and other MIDI gear. The MIDI I/O works just like any 16 channel MIDI interface and is perfectly in sync with all your audio tracks! The stereo S/PDIF I/O gives you a convenient digital interface for DAT decks and CD burners as well as most samplers and CD players so you can flawlessly dump stereo tracks down to DAT or load in your favorite CD's without any loss of audio quality. Even if you don't use digital I/O right now, it's nice to know you've got a completely digital link to the future built in with your new DIRECT PRO 24/96!

### **How many DIRECT PRO 24/96's can I put in my PC?**

Each DIRECT PRO 24/96 has 4 separate inputs, and you can use up to four complete systems in any one PC! For each complete DIRECT PRO 24/96 system you'll need an available PCI. The unique control panel software automatically recognizes each card installed. You'll have to loop the S/PDIF digital I/O together with each system to make sure all 8, 12 or 16 channels of audio are perfectly in sync.

In fact, you can use up to four of any of Aardvark's PC audio cards in the any one PC. This lets you keep adding cards as you expand your studio so you're not limited in any way!

### **Can I rack mount my Direct Pro 24/96?**

Of course. Most people like the rugged breakout box just sitting on their desktop or right by their PC for easy front panel access. But for those professionals that would rather their DIRECT PRO 24/96 be in a standard 19" rack, then we sell separately a 2U high very rugged 19" rack that we custom designed specifically for the DIRECT PRO 24/96. These racks are available for either just one DIRECT PRO 24/96 or for 2 DIRECT PRO 24/96 units sitting side by side in a different 2U high, 19" rack. It's real easy to install and you don't need to open up anything. Just screw the box in the rack and you're on your way. Ask your local dealer for more information.



202 E. Washington #306, Ann Arbor, MI 48104 USA  
tel: 734-665-8899 fax: 734-665-0694  
[www.AardvarkAudio.com](http://www.AardvarkAudio.com)